



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4  
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ATLANTA FEDERAL CENTER  
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ATLANTA GEORGIA 30303-8960

February 6, 2012

Susan Jeheber-Matthews  
Forest Supervisor  
Apalachicola National Forest  
325 John Knox Road,  
Tallahassee, Florida 32303

**RE: Draft Environmental Impact Statement, City of Tallahassee Southwestern  
Transmission Line Project  
CEQ Number: 20110426**

Dear Ms. Jeheber-Matthews:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the subject Draft Environmental Impact Statement, City of Tallahassee Southwestern Transmission Line Project. The USDA Forest Service is the lead federal agency for the proposed action.

This Draft Environmental Impact Statement (DEIS) is being prepared by the United States Department of Agriculture, Forest Service (USFS) to evaluate the potential environmental impacts associated with the Southwestern Transmission Line project proposed by the City of Tallahassee (The City). The City proposes to traverse a previously disturbed portion of the Apalachicola National Forest (ANF), which would require the ANF to issue the City a Special Use Permit (SUP). The project would provide enhanced system benefits that would meet the North American Electric Reliability Corporation's mandated requirements and would improve overall system performance and reliability of service to City utility customers.

Specifically, the City proposes to construct, operate, and maintain a new overhead 230-kilovolt (kV) electric transmission line in southwestern Leon County, Florida. The proposed line would connect the existing Hopkins-Crawfordville 230kV transmission line with the existing Substation BP-5, southeast of the intersection of Capital Circle SE and Woodville Highway. This action would include the development of a new tap station.

### PLAN ALTERNATIVES

The No Action Alternative, Alternative 1 (the Preferred Alternative), and Alternative 3 (the off-Forest Service property alternative route) are carried forward through the EIS.

**The No Action Alternative** considers the environmental impacts if the proposed project or its alternatives were not built. Evaluation of the No Action Alternative is a requirement of NEPA and its associated implementing regulations (40 CFR 1502.14[d]) to allow federal decision-makers (in this case, the USFS) to compare the impacts of the proposed project and its alternatives with the impacts of not approving the project. The Forest Service only has authority to authorize an SUP for the construction and maintenance of the proposed transmission line on National Forest System Lands. Not authorizing the SUP would not prohibit the City from constructing the transmission line off of National Forest System Lands. Consideration of the No Action Alternative in this EIS compares the impacts should the City of Tallahassee decide not to construct a transmission line off of National Forest System Lands.

Under the No Action Alternative, the electrical transmission system proposed to connect Line 31 to the existing Substation BP-5 would not be constructed. Proposed improvements to the City's 31 transmission system are necessary in order for the City to continue its operation within applicable limits consistent with the requirements of NERC Reliability Standards. Without the proposed system improvements, City planning assessments indicate that the existing lines forming the southern delivery path could exceed their applicable limits (thermal, voltage, IROLs, and/or SOLs) as a result of contingencies impacting the northern delivery path. Further, a USFS decision approving the No Action Alternative would result in the City being in non-compliance with NERC Reliability Standards, resulting in potential fines and penalties.

**Alternative 1 (the Preferred Alternative)** proposed transmission line under would be approximately 8.75 miles long and would require a 60-foot-wide permanent ROW. The entire 8.75-mile ROW would be co-located with existing utilities, allowing for overlap in the ROW. Seven of the 8.75 miles would be located within the 60-foot-wide temporary work space which was previously cleared of forested vegetation during improvement work on the existing 80-foot-wide FGT ROW in 2010. Of the 7 miles of the Alternative 1 ROW co-located with the FGT ROW, 6.48 miles is located within the ANF.

The Alternative 1 route would begin at a tap point along the existing Line 31 utilizing a new tap station near Bice Road (Forest Road 317), in the vicinity of the intersection of Springhill Road (County Road 2203) and Bice Road (Figure 2-4). From the proposed tap station, the Alternative 1 route would continue east, primarily co-located along the south side of the existing FGT natural gas pipeline corridor through the ANF for approximately 6.48 miles.

Approximately 3 miles east of the proposed tap station, the Alternative 1 route would cross an existing City 115kV transmission line. The proposed line would proceed east crossing Crawfordville Highway (US 319) and Wakulla Springs Road (State Road [SR] 61). Almost immediately to the east of Wakulla Springs Road, the Alternative 1 route would cross Munson Slough.

Continuing along the co-located corridor approximately 5 miles east of the proposed tap station, the Alternative 1 route would cross another existing City 115kV transmission line and would continue east, crossing the Tallahassee-St. Marks Historic Railroad State Trail and Woodville Highway (SR 363). Approximately 0.5 mile east of Woodville Highway, after

crossing a third existing City 115kV transmission line, the route would turn northwest and would continue north co-located along the east side of this existing transmission corridor for approximately 1.75 miles before terminating at the existing Substation BP-5 south of Capital Circle SE.

Approximately 7 miles of the east-west portion of the Alternative 1 route would be co-located along the existing FGT pipeline corridor; 6.48 miles of which would be within the ANF. As documented in the FGT FEIS (FERC 2009), FGT added a new pipeline to this corridor, resulting in the co-location of three pipelines. Due to the proposed co-location with an existing linear corridor, this alternative would be in compliance with the LRMP and would not require an amendment to the plan. Standard LA-9 governs the granting of SUPs and states that the USFS shall “designate existing transportation and utility routes, and rights-of-way capable of accommodating these facilities [facilities for which SUPs are sought] as right-of-way corridors. Subsequent right-of-way grants would, to the extent practicable, be confined to designated corridors.”

Under Alternative 1, no new access roads would be necessary for construction and maintenance of the Proposed Action. The Alternative 1 route would utilize access roads previously utilized by FGT for their pipeline construction efforts and existing City access roads on the existing City 115kV transmission line easement. An extensive network of existing Forest Roads and existing publicly maintained roadways also would be utilized by construction and maintenance equipment. Two staging or laydown areas would be required for Alternative 1. These staging areas would be located within the existing FGT temporary construction ROW. One staging area would be located west of Munson Slough near the proposed Alternative 1 tap station. The second lay down area would be located east of Munson Slough, outside the ANF. Therefore, no additional workspace outside the ROW footprint or existing roads would be needed for the transmission line.

Under **Alternative 1**, the **proposed tap station** would be located within the ANF. The design for the tap station would have two breakers west of Bice Road and one breaker east of Bice Road. The proposed design would require an additional 100-foot-wide ROW (9,000 square feet) to connect the tap station to power line structures. The proposed tap station equipment would occupy approximately 0.33 acre and would require approximately 3 acres for construction. Construction of the proposed tap station would begin with clearing and grading of approximately 3 acres. A fence would be installed around the perimeter of the tap station to provide for public safety and security. Access to the tap station for construction activities would be via Bice Road. Construction of Alternative 1 and the tap station would occur over an approximately six-month timeframe and would require a temporary workforce of approximately 30 personnel.

**Alternative 3** is being analyzed in compliance with the USFS’s 1999 LRMP Standards LA-8 and LA-9 which govern the issuance of SUPs. Standard LA-8 states that proposals for an SUP should “not be undertaken on national forest land if they can be reasonably accommodated on private land.” Further, Standard LA-9 states that “alternative locations off national forests [which can accommodate the proposal will be reviewed in detail.” Selection of this alternative is not within the authority of the USFS. If issuance of an SUP is denied by the USFS, the City may

pursue this or other alternatives outside of the ANF following applicable local and state procedures without involvement from the USFS. However, it will be analyzed herein to comply with the LRMP Standards described above.

## **EPA COMMENTS and RECOMMENDATIONS**

### **General Comments**

The impact from the construction of a transmission line can be measured in several different ways. Useful measurements of impacts may be area (acreage), distance (miles or feet), or the number of transmission structures. The effect of a new transmission line on an area may depend on the topography, land cover, and existing land uses. In forested areas the entire right-of-way (ROW) width is cleared and maintained free of tall-growing trees for the life of the transmission line. The result is a permanent change to the ROW land cover. In general the degree of impact of a proposed transmission line is determined by the quality or uniqueness of the existing environment along the proposed route. The quality of the existing environment is influenced by several factors:

#### **The degree of disturbance that already exists**

The significance of prior disturbance can be evaluated by determining how close the place resembles pre-settlement conditions. Many areas have been substantially altered by logging, the installation of drain tiles, residential and commercial developments, or conversion to cropland.

#### **The uniqueness of the resources**

Proposed transmission routes are reviewed for species or community types that are uncommon or in decline in the region or state. The environmental review evaluates whether the resource possesses a feature that would make it unique, such as its size, species diversity, or whether the resource plays a special role in the surrounding landscape.

#### **The threat of future disturbance**

The resource is compared to surrounding land uses which may affect the quality of the resource over time. Whether the current and likely future land uses may threaten some aspect of the resource. Whether the resource is valued by the adjacent community and therefore, likely to be preserved.

The construction of a transmission line involves both long-term and temporary impacts. Long-term impacts can exist as long as the line is in place and include land use restrictions and aesthetic impacts. Temporary impacts occur during construction or at infrequent intervals such as during line repair or ROW maintenance. Temporary impacts during construction can include noise and crop damage. Short-term impacts can become long-term impacts if not properly managed or mitigated.

## **Types of Impacts Associated with Transmission Lines**

### **Aesthetics**

#### *Potential Aesthetic Impacts*

The overall aesthetic effect of a transmission line is likely to be negative to most people, especially where proposed lines would cross natural landscapes and private properties. The tall steel or wide H-frame structures may seem out of proportion and not compatible with agricultural landscapes or residential neighborhoods. Landowners who have chosen to bury their electric distribution lines on their property may find transmission lines bordering their property particularly disruptive to scenic views.

#### *Mitigation of Aesthetic Impacts*

Electric transmission lines may be routed to avoid areas considered scenic. Routes can be chosen that pass through commercial/industrial areas or along land use boundaries. The form, color, or texture of a line can be modified to somewhat minimize aesthetic impacts. There are some choices available in transmission structure color and/or construction material. Structures constructed of wood or of rust brown oxidized steel may blend better with wooded landscapes. Stronger conductors can minimize line sag and provide a sleeker profile. ROW management can also mitigate visual impacts of transmission lines. Some of these techniques include planting vegetative screens to block views of the line, leaving the ROW in a natural state at road crossings, and placing or piling brush from the cleared ROW so that it provides wildlife habitat. In the end, aesthetics are to great extent based on individual perceptions. Siting, design construction materials, and ROW management can mitigate some of the adverse aesthetic effects of a line. It is in the interest of the applicant and the affected landowners to discuss these measures early in the planning and design process.

### **Electric and Magnetic Fields (EMF)**

#### *Potential Impacts of EMF*

Health concerns over exposure to EMF are often raised when a new transmission line is proposed. Exposure to electric and magnetic fields caused by transmission lines has been studied since the late 1970s. These fields occur whenever electricity is used. A magnetic field is created when electric current flows through any device including the electric wiring in a home. Every day we are exposed to many sources of EMF from vacuum cleaners, microwaves, computers, and fluorescent lights. The research to date has uncovered only weak and inconsistent associations between exposures and human health. To date the research has not been able to establish a cause and effect relationship between exposure to magnetic fields and human disease, nor a plausible biological mechanism by which exposure to EMF could cause disease. The magnetic fields produced by electricity do not have the energy necessary to break chemical bonds and cause DNA mutations.

## *Reducing EMF Levels of Transmission Lines*

Magnetic fields can be measured with a gauss meter. The magnitude of the magnetic field is related to current flow, not line voltage. A 69 kV line can have a higher magnetic field than a 345 kV line. Magnetic fields quickly dissipate with distance from the transmission line. A common method to reduce EMF is to bring the lines closer together. This causes the fields created by each of the three conductors to interfere with each other and produce a reduced total magnetic field. Magnetic fields generated by double-circuit lines are less than those generated by single-circuit lines because the magnetic fields interact and produce a lower total magnetic field. In addition, double circuit poles are often taller resulting in less of a magnetic field at ground level.

## **Endangered/Threatened and Protected Species**

### *Potential Impacts to Protected Species*

Endangered species are species whose continued existence is in jeopardy. Threatened species are likely to become endangered. Species of special concern have some problems related to their abundance or distribution, although more study is required. Construction and maintenance of transmission lines might destroy individual plants and animals or might alter their habitat so that it becomes unsuitable for them. For example, trees used by rare birds for nesting might be cut down or soil erosion may degrade rivers and wetlands that provide required habitat.

Construction of the east-west component of Alternative 1 would result in a permanent 140-foot wide ROW through the ANF. Although this entire ROW was previously cleared by construction of the FGT gas pipeline, Alternative 1 would convert a 60-foot wide portion of this ROW from temporary workspace, which would have been allowed to revert to native forests, to permanently cleared, non-forested operational work space. Because of this, construction of Alternative 1 may result in cumulative impacts by creating a barrier that could potentially block the migratory movements of protected or Forest Service sensitive amphibians such as striped newts and Florida gopher frogs between their upland habitat and their ephemeral breeding ponds. No other measurable cumulative impacts on threatened, endangered, or Forest Service sensitive species are anticipated from construction of Alternative 1.

### *Mitigation of Impacts to Protected Species*

If preliminary research and field assessments indicate that rare species or natural communities may be present in the project area, the utility should conduct US Fish and Wildlife Service (USFWS)-approved surveys prior to construction. If a state-listed species is likely to be in the project area, impacts can usually be avoided or minimized by redesigning or relocating the transmission line, special construction techniques, or limiting the time of construction to specific seasons. In some limited cases, transmission line ROWs can be managed to provide habitat for endangered/threatened resources. An example includes osprey nesting platforms built on top of transmission poles. Close cooperation between the transmission provider, ROW maintenance staff, and the USFWS is needed to develop an effective management plan.

## **Invasive Species**

### *Potential Impacts by Invasive Species*

Non-native plants, animals, and microorganisms found outside of their natural range can become invasive. The majority of non-native species are harmless because they do not reproduce or spread abundantly in their new surroundings. Some non-native species have been introduced intentionally, however, a small percentage of non-native species are able to become quickly established, are highly tolerant of a wide range of conditions, and are easily dispersed. The diseases, predators, and parasites that kept their populations in check in their native range may not be present in their new locations. Over time, non-native, invasive species can overwhelm and eliminate native species, reducing biodiversity and negatively affecting both ecological communities and wildlife habitats. Human actions are the primary means of invasive species introductions. Transmission line construction causes disturbance of ROW soils and vegetation through the movement of people and vehicles along the ROW, access roads, and laydown areas. These activities can contribute to the spread of invasive species. Parts of plants, seeds, and root stocks can contaminate construction equipment and essentially “seed” invasive species wherever the vehicle travels. Invasive species’ infestations can also occur during periodic transmission ROW maintenance activities especially if these activities include mowing and clearing of vegetation. Once introduced, invasive species will likely spread and impact adjacent properties with the appropriate habitat.

### *Best Management Practices*

To establish preventive measures to help minimize their spread Best Management Practices (BMP) will assist utilities in complying with “reasonable precaution” requirements. BMPs identify many methods that can be used to limit the introduction and spread of invasive species during and post-construction. These measures include marking and avoidance of invasives, timing construction activities during periods that would minimize their spread, proper cleaning of equipment, and proper disposal of woody material removed from the ROW. Because construction measures may not be completely effective in controlling the introduction and spread of invasives, post-construction activities are required. Sensitive areas such as wetlands and high quality forests should be surveyed for invasive species following restoration of the construction site. If new infestations are discovered, then measures should be taken to control the infestation. Each exotic or invasive species requires its own protocol for control or elimination. Techniques to control exotic/invasive species include the use of pesticides, biological agents, hand pulling, controlled burning, and cutting or mowing.

## **Water Resources**

### *Potential Impacts to Surface Waters*

Surface waters in the form of creeks, streams, rivers, and lakes are abundant throughout Florida. Many of these waters have been designated as special resources that have state, regional, or national significance. Construction and operation of a transmission line across these resources may have both short-term and long-term effects. Water quality can be impacted not only by work within a lake or river but also by nearby clearing and construction activities. The removal of adjacent vegetation can negatively affect aquatic habitats. It can also increase erosion of

adjacent soils causing sediment to be deposited into the waterbody, especially during rain events. Construction often requires the building of temporary bridges across small channels, which if improperly installed may damage banks and cause erosion. Overhead transmission lines across major rivers, streams, or lakes may have a visual impact on the users and pose a potential collision hazard for waterfowl and other large birds, especially when located in a migratory corridor.

Surface waters in the vicinity of Alternatives 1 and 3 are relatively limited, consisting primarily of Lake Munson and Munson Slough located southwest of Tallahassee. Lake Munson is a cypress-lined impoundment of Munson Slough covering 255 acres. Lake Munson drains south through Munson Slough for several miles to Ames Sink. Munson Slough (upstream of Lake Munson) is impaired for dissolved oxygen and fecal coliform. Downstream of Lake Munson, Munson Slough is impaired for dissolved oxygen and un-ionized ammonia. Alternative 1 ROW would avoid all direct impacts to surface water bodies (including Munson Slough and the unnamed tributary to Munson Slough), as in-stream work would not be necessary and these crossings would be spanned.

Alternative 3 would not cross any streams, rivers, creeks, canals, ponds, or lakes. The Alternative 3 ROW would not traverse any surface waterbodies and would therefore result in no potential impacts to surface water resources during construction or long-term maintenance of the project.

#### *Mitigation of Impacts to Surface Waters*

Techniques for minimizing adverse effects of constructing transmission lines in river and stream environments include avoiding impacts, minimizing impacts, and/or effective remediation of the impacts. Impacts to surface waters can be avoided by rerouting the line away from the waterbody, adjusting pole placements to span the resource overhead, boring the line under the resource, or constructing temporary bridge structures across the resource. Methods to minimize impacts include avoiding pole placements adjacent to the resource, erosion control methods, using alternative construction methods such as helicopter construction, landscaping to screen the poles from the view of river users, and maintaining shaded stream cover. After construction, some impacts can be remediated. There are several methods and cable types for constructing a transmission line under a resource. Lower voltage and distribution lines are commonly directionally bored under the waterway. High voltage lines are rarely constructed underground due to the substantial engineering, costs, and operational hurdles that would need to be overcome for it to be a feasible alternative to overhead construction. Constructing a line underground will minimize construction and esthetic impacts to the resource. However, it does require potentially large construction entrance and exit pits on either side of the resource. There are also concerns about the potential for frac-outs which can release drilling fluids into the waterbody and subsurface environment.

Proper erosion control is necessary for all construction activities, especially those that may affect water resources. BMPs should be employed before, during, and immediately after construction of the project to reduce the risk of excess siltation into streams. Erosion controls must be regularly inspected and maintained throughout the construction phase of a project until exposed soil has been stabilized. Woodlands and shrub/scrub areas along streams are a valuable buffer between adjacent farm fields and corridors of natural habitats. The vegetation maintains

soil moisture levels in stream banks, helps stabilize the banks, and encourages a diversity of vegetation and wildlife habitats. Existing vegetative buffers should be left undisturbed or minimally disturbed, whenever possible. For areas where construction impacts cannot be avoided, low-growing native tree and shrub buffers along these streams should be allowed to regrow and/or should be replanted so as to maintain the preconstruction water quality in the streams.

## **Wetlands**

### *Potential Impacts to Wetlands*

Wetlands occur in many different forms and serve vital functions including storing runoff, regenerating groundwater, filtering sediments and pollutants, and providing habitat for aquatic species and wildlife. The construction and maintenance of transmission lines can damage wetlands in the following ways:

- \* Heavy machinery can crush wetland vegetation and wetland soils.
- \* Wetland soils, especially very peaty soils can be easily compacted, increasing runoff, blocking flows, and greatly reducing the wetland's water holding capacity.
- \* The construction of access roads can change the quantity or direction of water flow, causing permanent damage to wetland soils and vegetation.
- \* Construction and maintenance equipment that crosses wetlands can stir up sediments, endangering fish and other aquatic life.
- \* Clearing forested wetlands can expose the wetland to invasive and shrubby plants, thus removing habitat for species in the forest interior.
- \* Vehicles and construction equipment can introduce exotic plant species. With few natural controls, these species may out-compete high-quality native vegetation, destroying valuable wildlife habitat.

Any of these activities can impair or limit wetland functions. Organic soils consist of layers of decomposed plant material that formed very slowly. Disturbed wetland soils are not easily repaired.

Impacts to wetlands would be avoided as the two existing wetlands have been cleared previously by the FGT Project and each crossing is small enough that siting structures within these wetlands is not anticipated. Due to span distance limitations, Alternative 1 would involve the placement of structures within in the ROW in designated 100-year FEMA floodplains. However, since the proposed activities in 100-year floodplains would not involve any placement of fill, Alternative 1 would not result in any loss of flood storage or associated flood volumes.

Two wetlands would be crossed by the Alternative 1 ROW and they are both classified as Wet Prairies. Wet Prairies are comprised of grassy vegetation on wet soils and are usually distinguished from marshes by having less water and shorter herbaceous vegetation. These communities typically occur in depressed areas and are dominated by one or more of the following species: sawgrass (*Cladium* spp.), maidencane (*Panicum hemitomon*), cordgrass (*Spartina* spp.), spikerushes (*Elocharis* spp.), St. Johnswort (*Hypericum* spp.), spiderlily (*Hymenocallis* sp.), swampily (*Crinum* spp.), yellow-eyed grass (*Xyris* spp.), and whitetop sedge

(*Rhynchospora colorata*). No clearing will be required because previously cleared by a Florida Gas Transmission Company Project. Disturbance within the two wetlands would involve construction vehicles using the designated travel lanes on the Alternative 1 ROW (and within the ANF these travel lanes currently exist). Construction of a new transmission ROW within a designated wetland would require authorization under an Environmental Management Permit from the Leon County Department of Development Support and Environmental Management and a Section 404 Permit/Environmental Resource Permit from the United States Army Corps of Engineers (USACE) and the FDEP, respectively.

The ingress and egress of personal vehicles and construction equipment on the travel lane ROW during construction and post-construction maintenance activities could disturb or remove existing or restored herbaceous wetland vegetation cover, potentially resulting in erosion and sedimentation of wetlands. Additionally fuel or petroleum spills from refueling operations or construction equipment maintenance activities conducted near or in wetlands either during construction or post-construction maintenance could potentially result in contamination of wetlands.

Five wetlands that would be crossed by the Alternative 3 ROW. To the extent practicable, construction within the Alternative 3 ROW would be designed to span 24 floodplain crossings. However, in some situations, only the footprint of the structures – and no other facilities – would be placed within the designated 100-year floodplains and the impact to floodplains due to construction within the Alternative 3 ROW would be considered negligible. In addition, the entire 1-acre fence line of the proposed Alternative 3 tap station is underlain by 100-year floodplain. The proposed 1-acre Alternative 3 tap station equipment would impact approximately 0.80 acres (i.e., 35,000 square feet) of land underlain by the 100-year floodplain. Any proposed development within the 100-year floodplain in Wakulla County would be reviewed by the County under Part II of the Wakulla County Code of Ordinances, Chapter 11 – Drainage & Flood Prevention (Strickland 2011). Any proposed development within the 100-year floodplain within Leon County will be reviewed by the County for compliance with Leon County's Land Development Regulations Chapter 10-4.503(d).

Mitigation measures to minimize these potential impacts should be expanded and included in the final EIS.

#### *Mitigation of Impacts to Wetlands*

To minimize the potential impacts to wetlands, the utility can:

- \* Avoid placing transmission lines through wetlands.
- \* Adjust pole placements to span wetlands or limit the number of poles located in wetlands, wherever possible.
- \* Use mats and wide-track vehicles to spread the distribution of equipment weight when crossing wetlands during the growing season.
- \* Use alternative construction equipment such as helicopters or marsh buggies for construction within wetlands.
- \* Clean construction equipment after working in areas infested by purple loosestrife or other known invasive, exotic species.

## **Forests**

### *Potential Impacts to Forests*

Forests provide recreational opportunities, wildlife and plant habitats, and timber. Building a transmission line through woodlands requires that all trees and brush be cleared from the ROW. One mile of 100-foot ROW through a forest results in the loss of approximately 12 acres of trees. Transmission construction impacts can include forest fragmentation and the loss and degradation of wooded habitat, aesthetic enjoyment of the resource, and/or the loss of income. Different machines and techniques are used to remove trees from the transmission ROW depending on whether woodlands consist of mature trees, have large quantities of understory trees, or are in sensitive environments such as a wooded wetland. These can range from large whole tree processors which can cause rutting and compaction of the forest floor to hand clearing with chainsaws in more sensitive environments. Smaller diameter limbs and branches are often chipped or burned. According to the landowner's wishes, wood chips may be spread on the ROW, piled to allow transport by the landowner to specific locations, or chipped directly into a truck and hauled off the ROW.

### *Forest Fragmentation*

A transmission line ROW can fragment a larger forest block into smaller tracts. Fragmentation makes interior forest species more vulnerable to predators, parasites, competition from edge species, and catastrophic events. The continued fragmentation of a forest can cause a permanent reduction in species diversity and suitable habitat. This loss of forested habitat increases the number of common (edge) plants and animals that can encroach into what were the forest interiors. This encroachment can have impacts on the number, health, and survival of interior forest species, many of which are rare.

In general, forest fragmentation has a negative impact on the existing quality of wildlife habitat by creating potential barriers to movement for some species and potentially increasing predation rates. In particular, fragmentation potentially can effect local populations of salamanders, toads, and frogs. Many of these amphibian species require forested migratory access to breeding ponds to maintain viable populations. The conversion of forested habitat to maintained (i.e., non-forested) linear utility lines could be a barrier to amphibian populations reaching their historic breeding ponds. For example, a population of salamanders occupying upland habitat on the north side of a proposed utility line ROW may be cut off from their breeding ponds on the south side of the ROW after utility line construction has been completed. This potential impact is dependent upon the width of the non-forested portion of the newly constructed ROW and the species of amphibians that live along the proposed ROW; that is, different species of amphibians have different tolerances as to the width of non-forested habitat that they will cross to reach their historic breeding ponds.

The implementation of Alternative 1 would increase the permanent non-forested width of the ROW through the ANF from the present 80 feet to 140 feet. Construction of the proposed project may result in measurable impacts to the diversity and abundance of the amphibian populations or the general wildlife community in the vicinity of either alternative. Mitigating measures for avoiding/minimizing potential impacts to wildlife populations should be included in the final EIS.

Due to greenfield construction and less co-location opportunities, the Alternative 3 ROW and tap station would require more clearing of forested vegetation than the Alternative 1 ROW (90.04 acres 12 versus 9.22 acres), thereby displacing general wildlife species requiring forested habitat to a greater extent than Alternative 1. However, this impact is expected to be negligible given that these species would likely move to adjacent undisturbed habitat.

Because Alternative 3 is co-located with existing linear features and would require widening of said corridors, forest fragmentation impacts could affect amphibian populations or the general wildlife community in the vicinity of Alternative 3. However, because Alternative 3 is located entirely outside of the ANF, it is not surrounded by contiguous forest to the extent of Alternative 1, therefore, forest fragmentation effects would likely be less for Alternative 3 when compared to Alternative 1.

#### *Environmental Justice (EJ)*

EPA recommends that an EJ evaluation be conducted for all communities within a reasonable radius of the study area. The EJ study should include more than just demographics and should include interviews with the potentially affected communities.

We rate this document EC-2 Environmental Concerns. We have concerns that the proposed action identifies the potential for impacts to the environment that should be further avoided/minimized. The draft EIS does not contain sufficient information to fully assess environmental impacts that should be avoided in order to fully protect the environment, which could reduce the environmental impacts of the proposal. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Based on the DEIS, Alternative 1 (the Preferred Alternative), with consideration of additional Best Practices, would appear to be the best approach.

We appreciate the opportunity to review the proposed action. Please contact Ken Clark at (404) 562-8282, [clark.ken@epa.gov](mailto:clark.ken@epa.gov) if you have any questions or want to discuss our comments.

Sincerely,



Heinz J. Mueller, Chief  
NEPA Program Office  
Office of Policy and Management